

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A condensate trap comprising a vortex chamber, an inlet and a single outlet, said vortex chamber defining a void and having a longitudinal axis extending through said void; the inlet being disposed to admit fluid into the chamber in a tangential direction with respect to ~~[[the]]~~ said longitudinal axis of the vortex chamber so as to promote a rotational flow of the fluid within the vortex chamber and about ~~[[a]]~~ said longitudinal axis, thereby to generate a low pressure region within the fluid that is centered on said longitudinal axis, and the outlet comprising an escape aperture situated at an axial end of the chamber so as to open into the low pressure region in operation of the condensate trap.

2. (Original) A condensate trap as claimed in Claim 1, wherein at least a portion of the vortex chamber is cylindrical.

3. (Previously Presented) A condensate trap as claimed in Claim 1, wherein at least a portion of the vortex chamber is frusto conical.

4. (Previously Presented) A condensate trap as claimed in Claim 2, wherein the cylindrical portion adjoins the wider diameter end of the frusto conical portion.

5. (Original) A condensate trap as claimed in Claim 4, wherein the inlet opens into the cylindrical portion.
6. (Previously Presented) A condensate trap as claimed in Claim 3, wherein the escape aperture is disposed at the narrower end of the frusto conical portion.
7. (Previously Presented) A condensate trap as claimed in Claim 1, wherein the escape aperture is situated on the longitudinal axis of the vortex chamber.
8. (Previously Presented) A condensate trap as claimed in Claim 1, wherein the escape aperture is provided in a transverse end wall of the vortex chamber.
9. (Previously Presented) A condensate trap as claimed in Claim 1, wherein the vortex chamber is provided in a control element supported by a body provided with inlet and outlet passages, the inlet passage communicating with the inlet to the chamber and the outlet passage communicating with the escape aperture.
10. (Previously Presented) A condensate trap as claimed in Claim 9, wherein the control element and the body abut each other at respective contact surfaces, the inlet and outlet passages opening at respective ports on the contact surface of the body, and the inlet and escape aperture communicating with respective ports at the contact surface of the control element.

11. (Original) A condensate trap as claimed in Claim 10, wherein the control element is engageable with the body in any one of the plurality of different rotational positions about the port communicating with the escape aperture.

12. (Original) A condensate trap as claimed in Claim 11, wherein the port communicating with the inlet comprises a circular groove in the contact face, centered on the port communicating with the escape aperture.

13. (Previously Presented) A condensate trap as claimed in Claim 9, wherein the inlet is one of a plurality of inlets which are directed tangentially of the chamber and are distributed equally around the chamber.

14. (Previously Presented) A condensate trap as claimed in Claim 9, wherein the control element is secured to the body by a cap.

15. (Original) A condensate trap as claimed in Claim 14, wherein the chamber is open at a face of the control element opposite the contact surface, the chamber being closed by the cap.

16. (Withdrawn) A condensate trap as claimed in Claim 1, further comprising a second inlet which directs the fluid towards the longitudinal axis of the chamber.

17. (Withdrawn) A condensate trap as claimed in Claim 16, wherein the second inlet is provided at the same longitudinal position along the vortex chamber as the first inlet.

18. (Withdrawn) A condensate trap as claimed in claim 16, further comprising switch means to select either the first or second inlet to provide the fluid into the chamber.

19. (Withdrawn) A condensate trap as claimed in Claim 18, wherein the switch means is respective to temperature sensing means, the temperature sensing means sensing the temperature of the fluid upstream of the trap.

20. (Previously Presented) A condensate trap as claimed in Claim 1, wherein the diameter of the escape aperture is not greater than 40 mm.

21. (Previously Presented) A condensate trap as claimed in Claim 20, wherein the diameter of the escape aperture is not greater than 30 mm.

22. (Cancelled)

23. (Previously Presented) A steam plant provided with a condensate trap comprising a vortex chamber, an inlet and a single outlet, the inlet being disposed to admit fluid into the chamber in a manner to promote a rotational flow of the fluid in the

chamber about a longitudinal axis of the chamber, and the outlet comprising an escape aperture at an axial end of the chamber.

24. (Currently Amended) A method of controlling a flow of steam and condensate, the method comprising:

directing the flow into a chamber having a longitudinal axis, in a direction that is tangential with respect to the longitudinal axis of the chamber so as to promote a rotational flow of the fluid steam in the chamber about the longitudinal axis thereby to generate a low pressure region within the fluid steam that is centered on said longitudinal axis, and

discharging the a fluid from the chamber through an escape aperture which is situated at an axial end of the chamber and opens into the low pressure region,

whereby condensate at a temperature below the saturation temperature of the steam at the pressure in the low pressure region is discharged through the escape aperture as liquid water at a relatively high mass flow rate, whereas condensate at a temperature higher than said saturation temperature flashes to steam within the low pressure region and is discharged through the escape aperture as steam at a relatively low mass flow rate.

25. (Cancelled)

26. (New) A condensate trap comprising a vortex chamber, an inlet, and a single outlet, said vortex chamber having a cylindrical wall positioned adjacent to a

frusto-conical wall that together define a void that extends from said inlet to said single outlet along a common longitudinal axis;

said inlet being arranged in said condensate trap so as to admit fluid into said vortex chamber in a tangential direction with respect to said common longitudinal axis so as to promote a rotational flow of said fluid within said void and about said common longitudinal axis, thereby to generate a low pressure region within said fluid that is centered about said common longitudinal axis; and

the outlet comprising an escape aperture situated at an axial end of said vortex chamber so as to open upon said low pressure region in operation of the condensate trap.